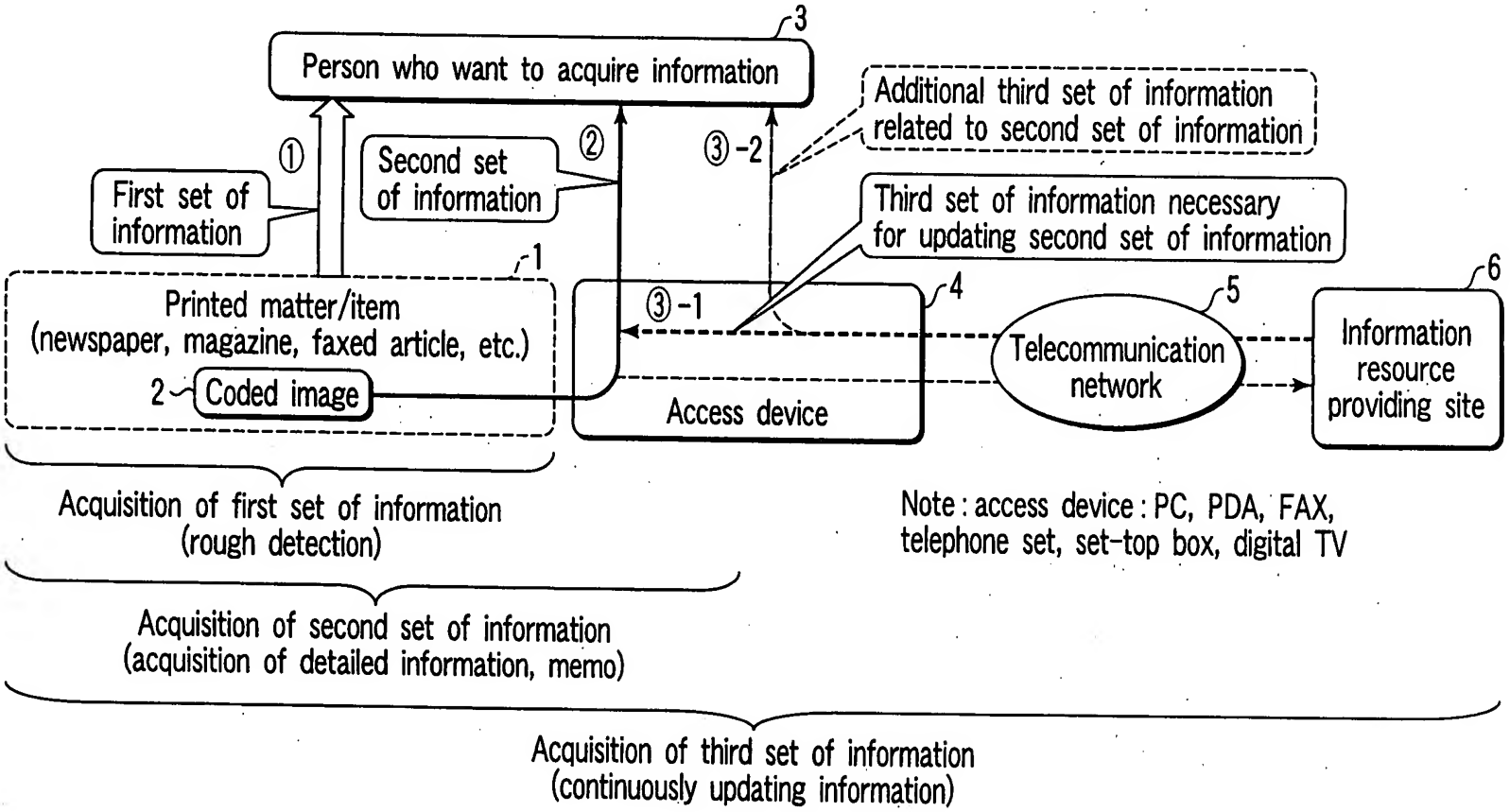

3
Person who want to acquire information
Additional third set of information related to second set of information
③-2
①
Second set of information
②
First set of information
Third set of information necessary for updating second set of information
1
Printed matter/item
(newspaper, magazine, faxed article, etc.)
2
Coded image
③-1
4
Access device
5
Telecommunication network
6
Information resource providing site
Acquisition of first set of information
(rough detection)
Note : access device : PC, PDA, FAX, telephone set, set-top box, digital TV
Acquisition of second set of information
(acquisition of detailed information, memo)
Acquisition of third set of information
(continuously updating information)

FIG. 1

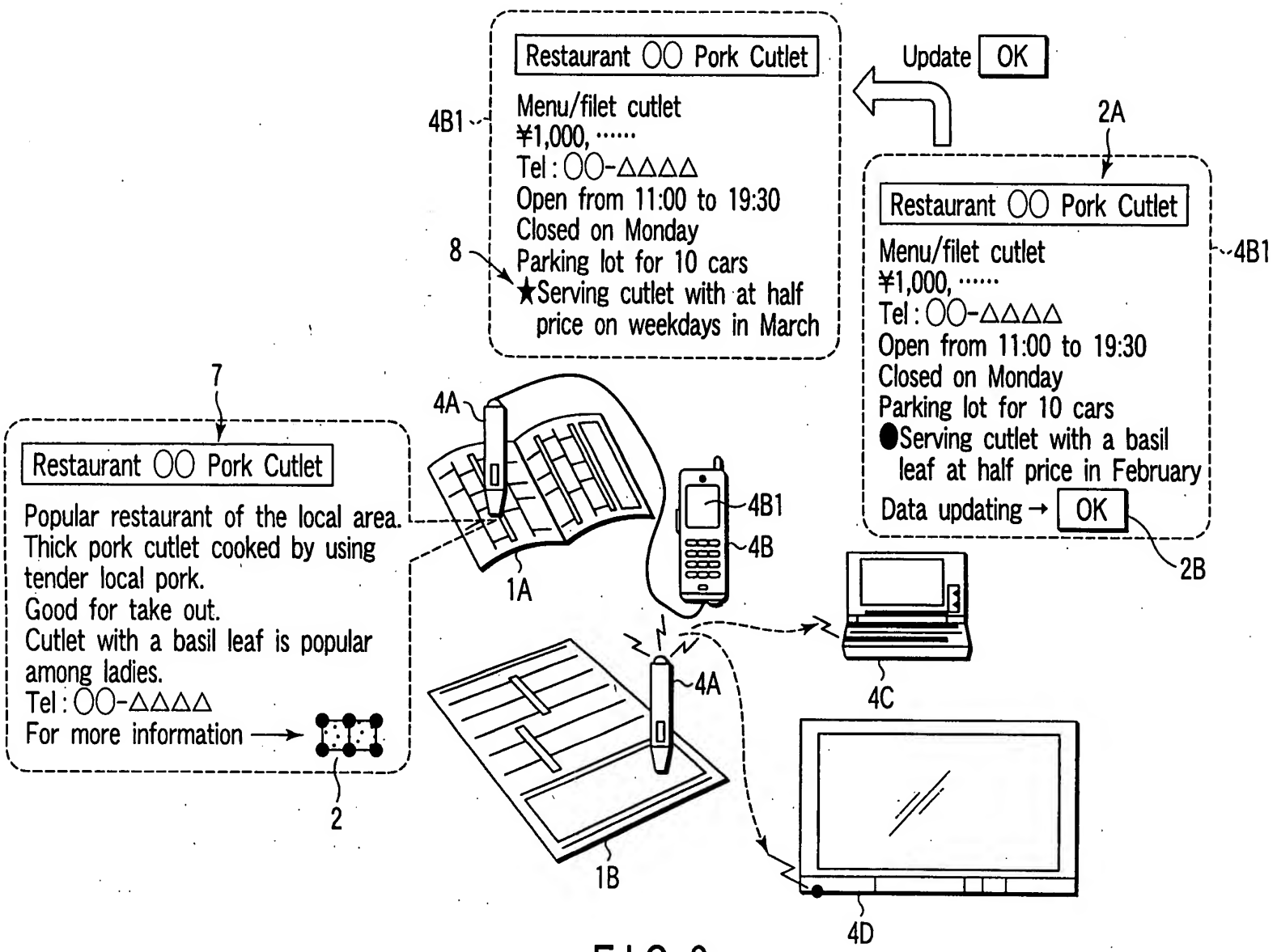

Restaurant ○○ Pork Cutlet
Menu/filet cutlet
¥1,000, ……
Tel : ○○-△△△△
Open from 11:00 to 19:30
Closed on Monday
Parking lot for 10 cars
★Serving cutlet with at half price on weekdays in March
4B1
8
Update
OK
2A
Restaurant ○○ Pork Cutlet
Menu/filet cutlet
¥1,000, ……
Tel : ○○-△△△△
Open from 11:00 to 19:30
Closed on Monday
Parking lot for 10 cars
●Serving cutlet with a basil leaf at half price in February
Data updating →
OK
4B1
2B
7
Restaurant ○○ Pork Cutlet
Popular restaurant of the local area.
Thick pork cutlet cooked by using tender local pork.
Good for take out.
Cutlet with a basil leaf is popular among ladies.
Tel : ○○-△△△△
For more information →
2
4A
1A
4B1
4B
4A
1B
4C
4D

FIG. 2

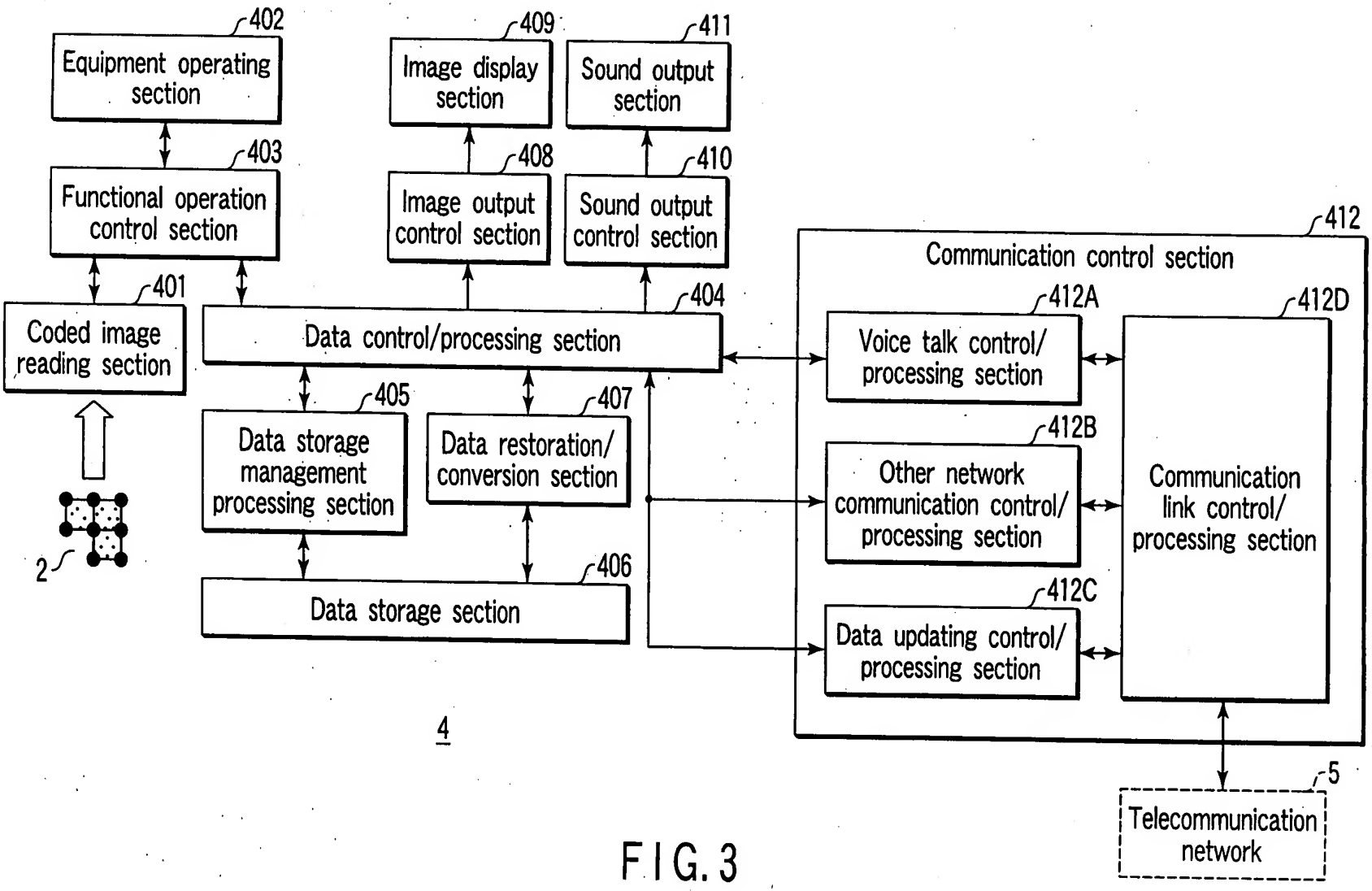

402
Equipment operating section
403
Functional operation control section
401
Coded image reading section
2
409
Image display section
408
Image output control section
411
Sound output section
410
Sound output control section
404
Data control/processing section
405
Data storage management processing section
407
Data restoration/ conversion section
406
Data storage section
4
412
Communication control section
412A
Voice talk control/ processing section
412B
Other network communication control/ processing section
412C
Data updating control/ processing section
412D
Communication link control/ processing section
5
Telecommunication network

FIG. 3

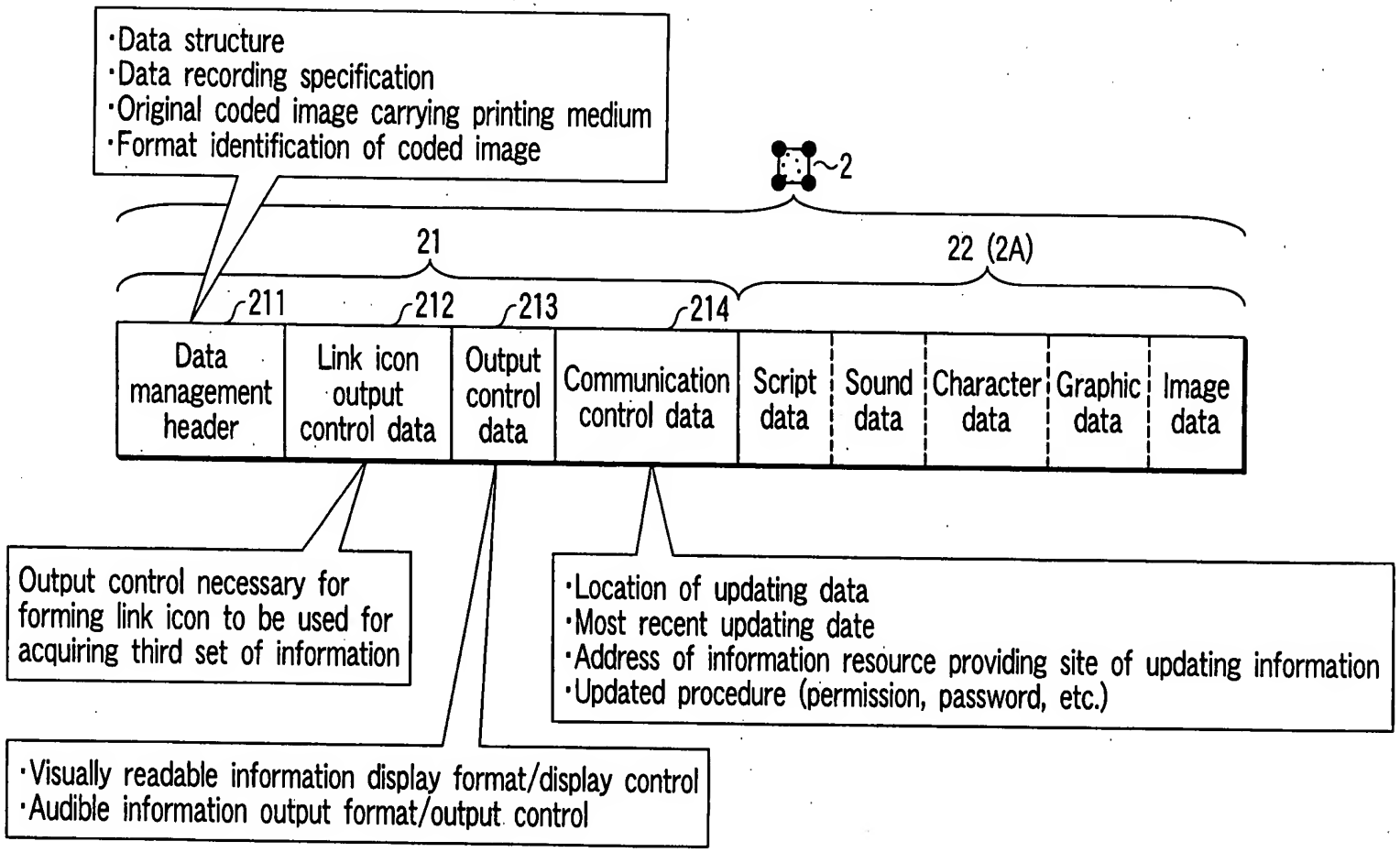

·Data structure
·Data recording specification
·Original coded image carrying printing medium
·Format identification of coded image
2
21
22 (2A)
211
212
213
214
Data management header
Link icon output control data
Output control data
Communication control data
Script data
Sound data
Character data
Graphic data
Image data
Output control necessary for forming link icon to be used for acquiring third set of information
·Location of updating data
·Most recent updating date
·Address of information resource providing site of updating information
·Updated procedure (permission, password, etc.)
·Visually readable information display format/display control
·Audible information output format/output control

FIG. 4

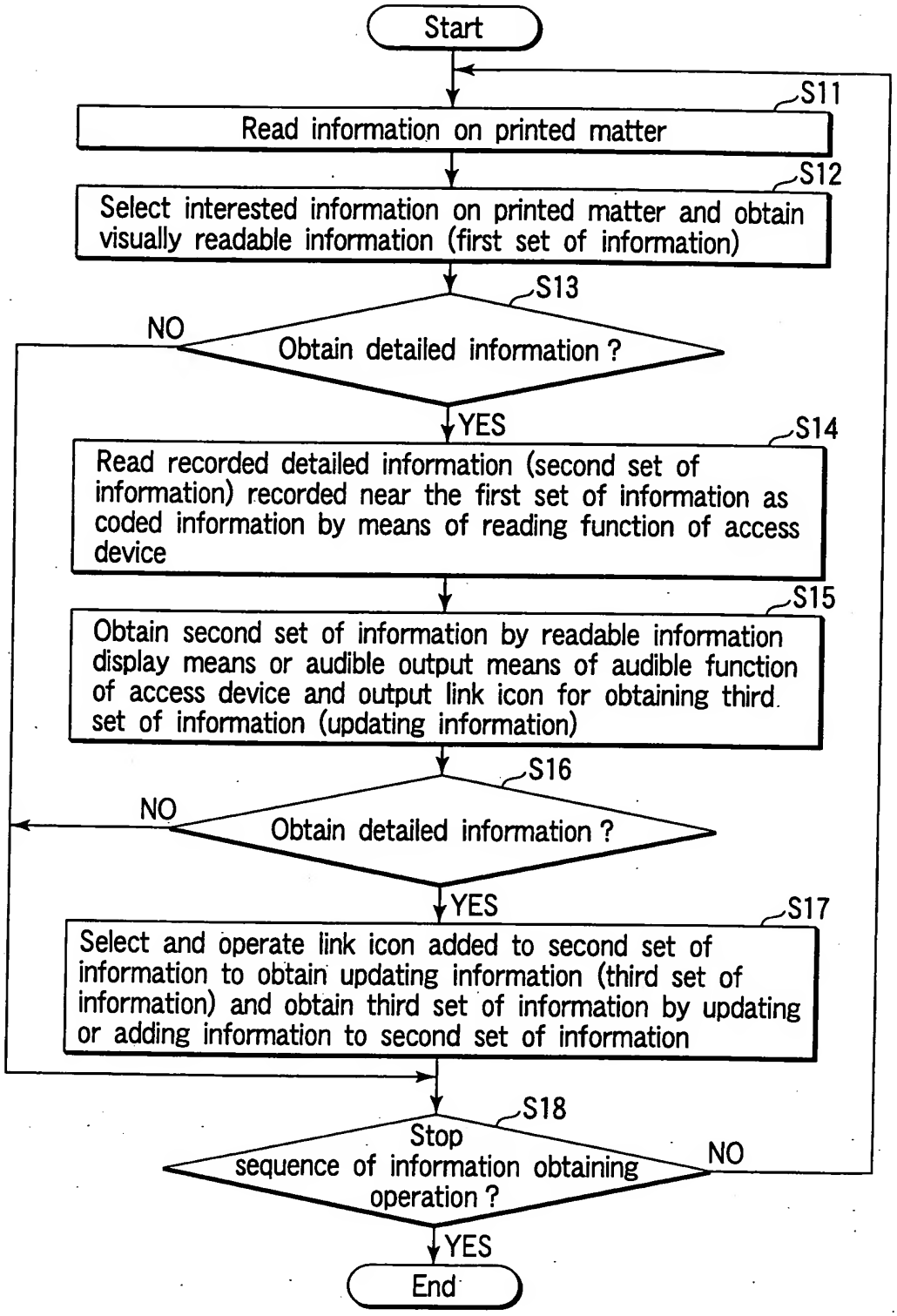

Start
S11
Read information on printed matter
S12
Select interested information on printed matter and obtain visually readable information (first set of information)
S13
Obtain detailed information ?
NO
YES
S14
Read recorded detailed information (second set of information) recorded near the first set of information as coded information by means of reading function of access device
S15
Obtain second set of information by readable information display means or audible output means of audible function of access device and output link icon for obtaining third set of information (updating information)
S16
Obtain detailed information ?
NO
YES
S17
Select and operate link icon added to second set of information to obtain updating information (third set of information) and obtain third set of information by updating or adding information to second set of information
S18
Stop sequence of information obtaining operation ?
NO
YES
End

FIG. 5

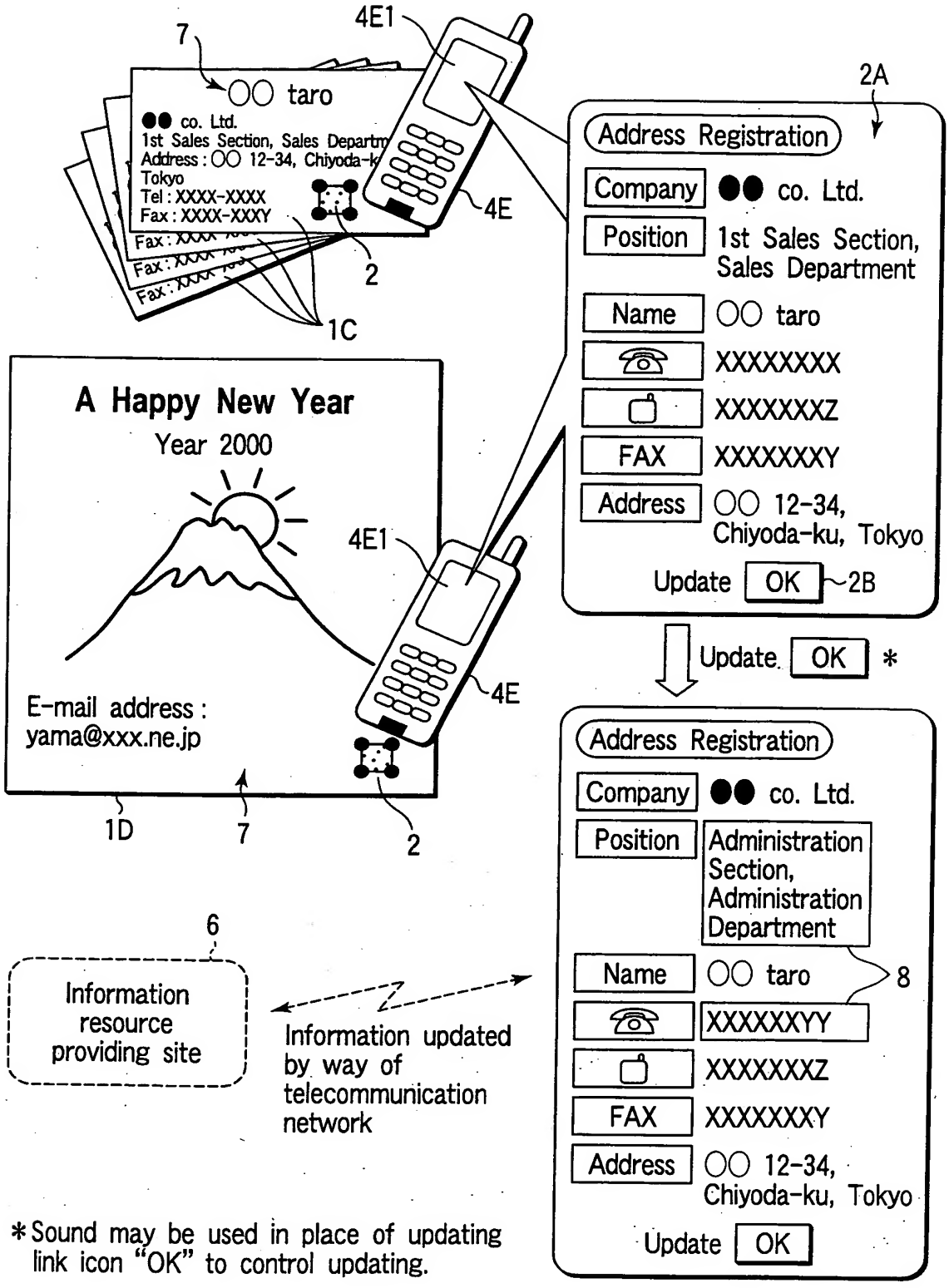

7
4E1
OO taro
●● co. Ltd.
1st Sales Section, Sales Departm
Address : OO 12-34, Chiyoda-k
Tokyo
Tel : XXXX-XXXX
Fax : XXXX-XXXY
4E
2
1C
2A
Address Registration
Company ●● co. Ltd.
Position 1st Sales Section, Sales Department
Name OO taro
XXXXXXXX
XXXXXXXZ
FAX XXXXXXXY
Address OO 12-34, Chiyoda-ku, Tokyo
Update OK
2B
A Happy New Year
Year 2000
E-mail address :
yama@xxx.ne.jp
1D
Update OK *
Address Registration
Company ●● co. Ltd.
Position Administration Section, Administration Department
Name OO taro
8
XXXXXXYY
XXXXXXXZ
FAX XXXXXXXY
Address OO 12-34, Chiyoda-ku, Tokyo
Update OK
6
Information resource providing site
Information updated by way of telecommunication network
* Sound may be used in place of updating link icon "OK" to control updating.

FIG. 6

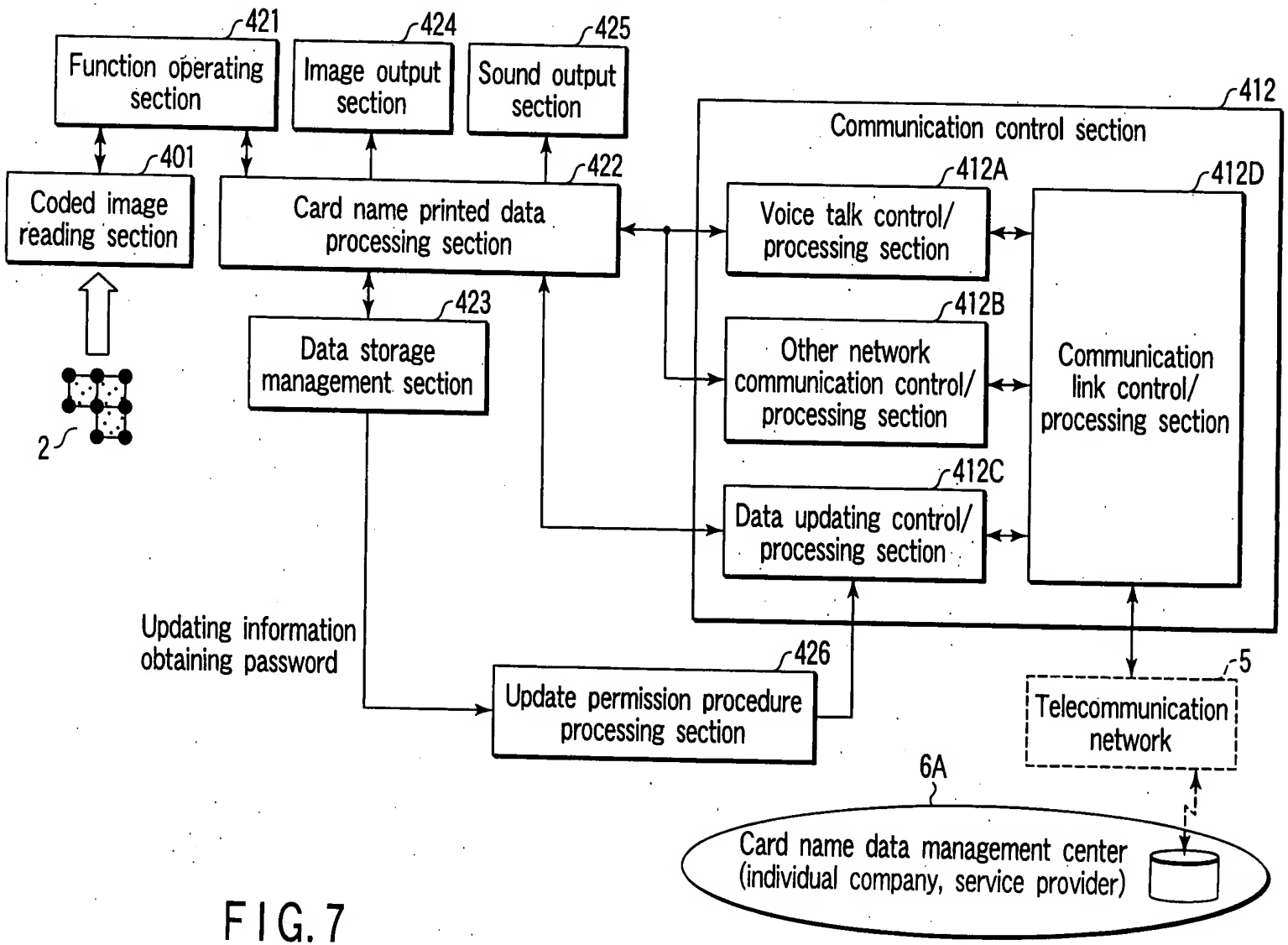

421
Function operating section
424
Image output section
425
Sound output section
412
Communication control section
401
Coded image reading section
422
Card name printed data processing section
412A
Voice talk control/ processing section
412D
Communication link control/ processing section
423
Data storage management section
412B
Other network communication control/ processing section
2
412C
Data updating control/ processing section
Updating information obtaining password
426
Update permission procedure processing section
5
Telecommunication network
6A
Card name data management center (individual company, service provider)

FIG. 7

First set of information (basic information)	Second set of information (detailed information)	Third set of information (updating information)
·Company name, department ·Address ·Title, name ·(ID photograph) ·How to contact (telephone number, fax number, e-mail address) ·Company home page URL	·Set of detailed basic information (in characters, sound) ·ID photograph, age, sex ·Home address, the place of birth, the names of the family members ·Professional history of card issuer ·Voice message of card issuer ·The dial tone calling card issuer ·Key data for exchanging confidential data ·Date of registration of the information printed on card	<Reception> ·Set of updating information ·Announcement of occurrence of updating ·Updating date ·Guide to business related information ·Information on direct mail and advertisements ·Effective period of updating information <Transmission> ·Control information. for updating procedure ·Information on business card receiver ·Message to the business card receiver ·Updating information of business card issuer

FIG. 8

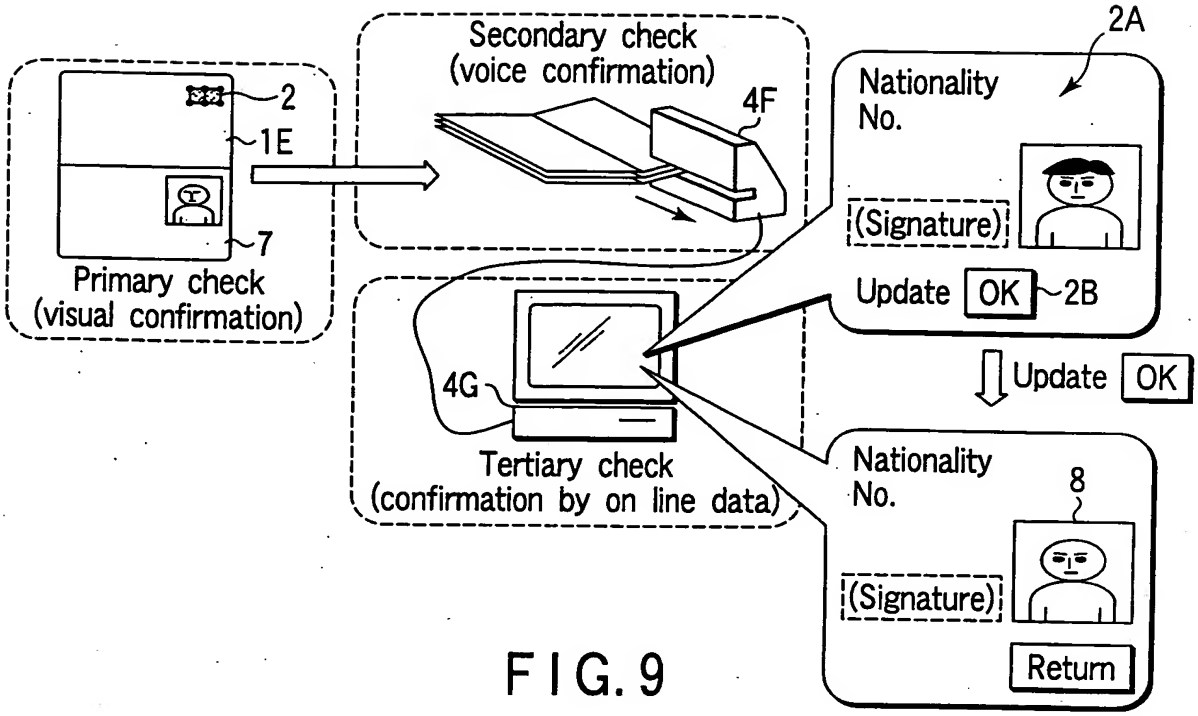

Secondary check
(voice confirmation)
2A
Nationality
No.
4F
2
1E
(Signature)
7
Primary check
(visual confirmation)
Update
OK
2B
Update
OK
4G
Tertiary check
(confirmation by on line data)
Nationality
No.
8
(Signature)
Return

FIG. 9

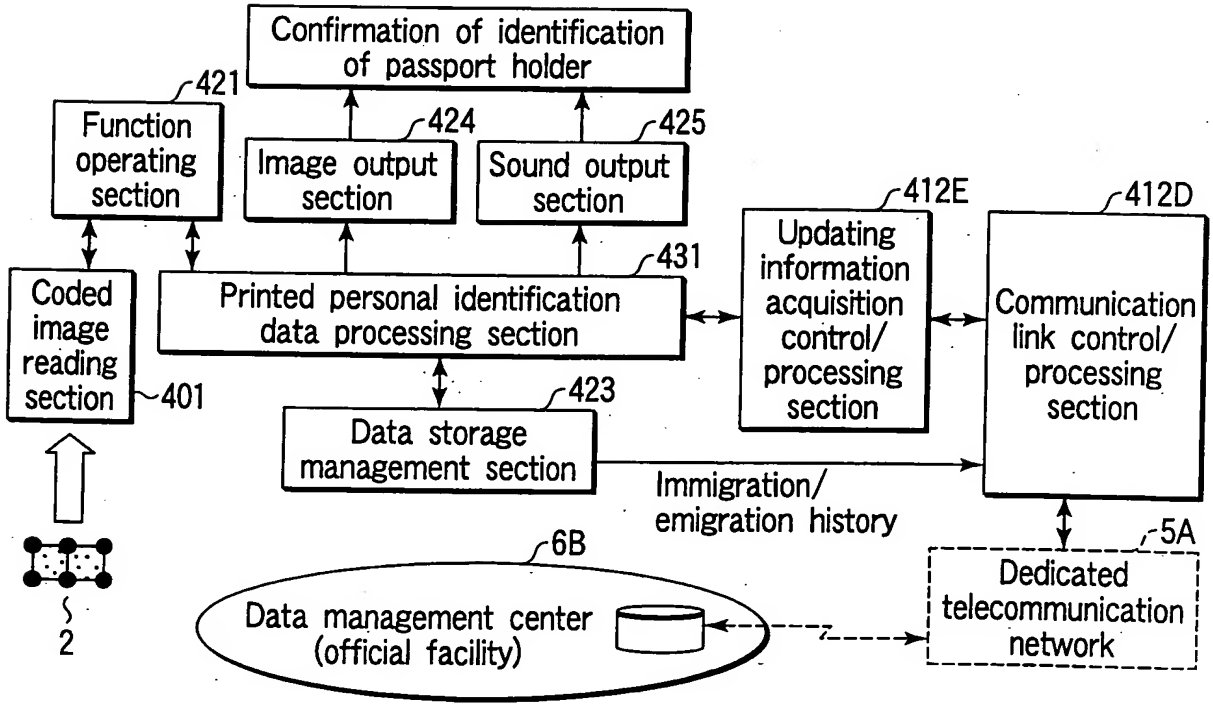

Confirmation of identification
of passport holder
421
Function
operating
section
424
Image output
section
425
Sound output
section
412E
412D
Updating
information
acquisition
control/
processing
section
Communication
link control/
processing
section
431
Coded
image
reading
section
401
Printed personal identification
data processing section
423
Data storage
management section
Immigration/
emigration history
5A
6B
Dedicated
telecommunication
network
Data management center
(official facility)
2

FIG. 10

First set of information (basic information)	Second set of information (detailed information)	Third set of information (updating information)
·Address, name, telephone number ·Signature ·Personal ID photograph ·Date of issue of personal ID	·Set of detailed basic information (in characters, sound) ·Personal photograph, age (date of birth), sex ·Home address, place of birth, names of family members ·Voiced phrase for identifying personal ID holder ·Signature, finger print ·Items characterizing personal ID holder ·Blood type, information on medical idiosyncratic features of personal ID holder ·Key data for electronic verifying services	<Reception> ·Set of updating information ·Announcement of occurrence of updating ·Updating date ·Effective period of updating information ·Effective period of personal ID <Transmission> ·Control information for updating procedure ·Information on personal ID control officer ·Date/place/object of checking personal ID

FIG. 11

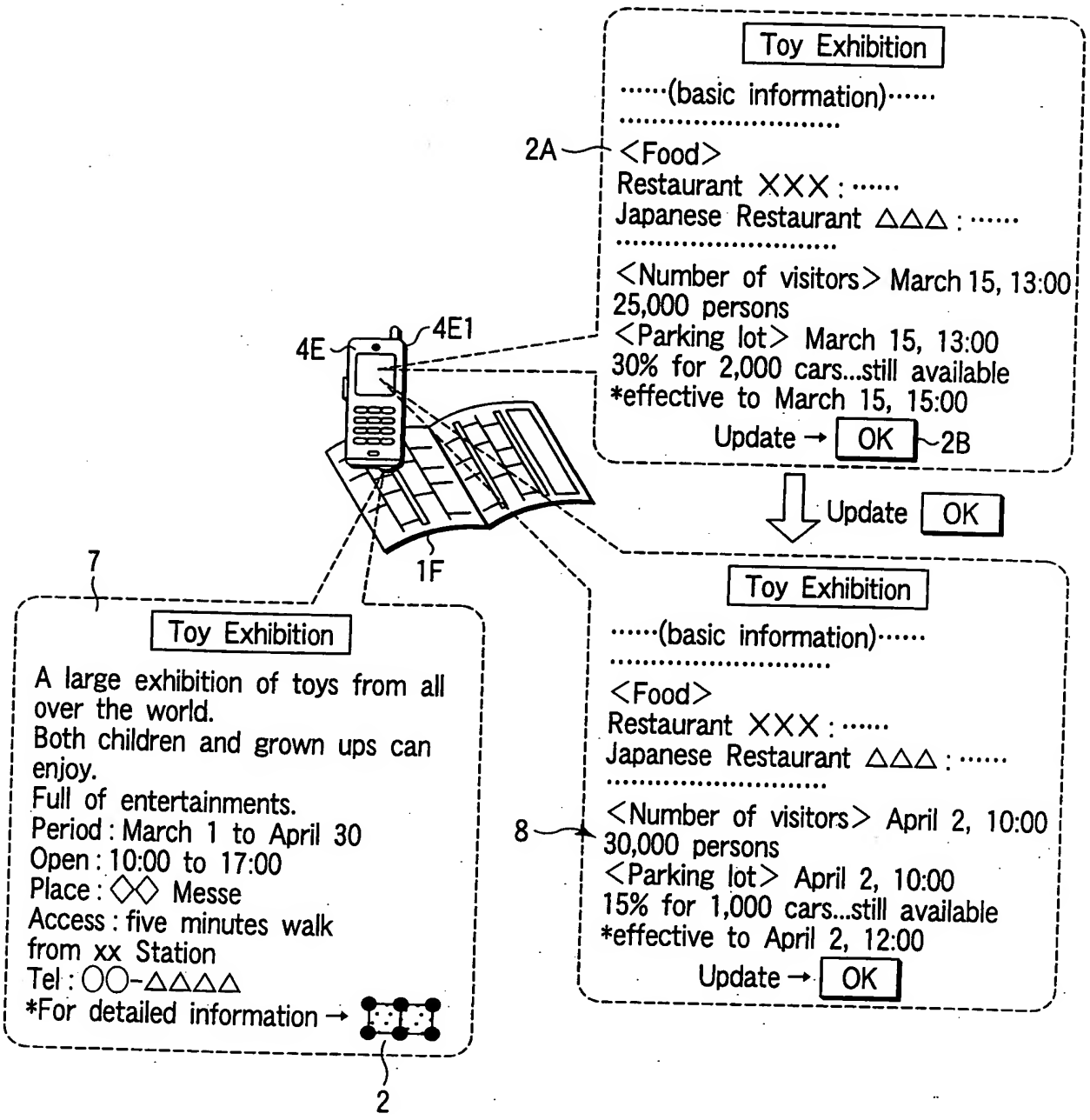

Toy Exhibition
……(basic information)……
2A
<Food>
Restaurant XXX : ……
Japanese Restaurant △△△ : ……
<Number of visitors> March 15, 13:00
25,000 persons
<Parking lot> March 15, 13:00
30% for 2,000 cars...still available
*effective to March 15, 15:00
Update → OK
2B
4E
4E1
1F
Update OK
7
Toy Exhibition
A large exhibition of toys from all over the world.
Both children and grown ups can enjoy.
Full of entertainments.
Period : March 1 to April 30
Open : 10:00 to 17:00
Place : ◇◇ Messe
Access : five minutes walk from xx Station
Tel : ○○-△△△△
*For detailed information →
2
Toy Exhibition
……(basic information)……
<Food>
Restaurant XXX : ……
Japanese Restaurant △△△ : ……
8
<Number of visitors> April 2, 10:00
30,000 persons
<Parking lot> April 2, 10:00
15% for 1,000 cars...still available
*effective to April 2, 12:00
Update → OK

FIG. 12

First set of information (basic information)	Second set of information (detailed information)	Third set of information (updating information)
·Title of event ·Opening date/period ·Summary of event ·Place, public transportation services ·Entrance fee ·Telephone number for enquiry	·Set of detailed basic information (in characters, sound) ·Guide for attractive spots, leading events ·Food services, guide for souvenirs ·Campaign guide ·Guide for advance booking	<Reception> ·Alterations to event ·Number of visitors ·Report on traffic congestion, information on available parking space ·Updating date ·Effective period of updating information <Transmission> ·Control information for updating procedure ·Information on responsible person ·Checking date

FIG. 13

First set of information (basic information)	Second set of information (detailed information)	Third set of information (updating information)
·Title ·Contents ·Rented date ·Type of medium (VT, DVD) ·Popularity rating ·Short comment	·Set of detailed basic information (in characters, sound) ·Casting (including photographs of actors and actresses) ·Highlights (images and sounds) ·The rental fee per day, the rental period, etc.	<Reception> ·Report on the arrival, current rental status ·Updated rental fee ·Guide for rental shops ·Announcement for other rental videos ·Invitation for membership, list of privileges of membership ·Updated rental ranking information ·Acquired points of the member <Transmission> ·Control information for updating procedure ·Information on responsible person, date/place ·Advance booking

FIG. 14

First set of information (basic information)	Second set of information (detailed information)	Third set of information (updating information)
·CD title ·Singers, lyric writers, composers ·Contents ·Released date ·Popularity rating ·Short comment	·Control information for information equipment display ·Set of detailed basic information (in characters, sound) ·Short introduction, highlights (sounds) ·Introduction of the singers (still images for promotion) ·Titles of all songs, the lyrics ·Hit chart ranking ·The price	<Reception> ·Arrival and stock ·Sale period ·Promotion video ·Authorized contents data of songs ·Updated hit chart ranking ·Guide for CD shops in the vicinity ·Guide for mail order placement ·Announcement for other CDs to be released ·Invitation for membership, list of privileges of membership ·Acquired points of the member <Transmission> ·Control information for updating procedure ·Information on responsible person, date/place ·Advance booking

FIG. 15

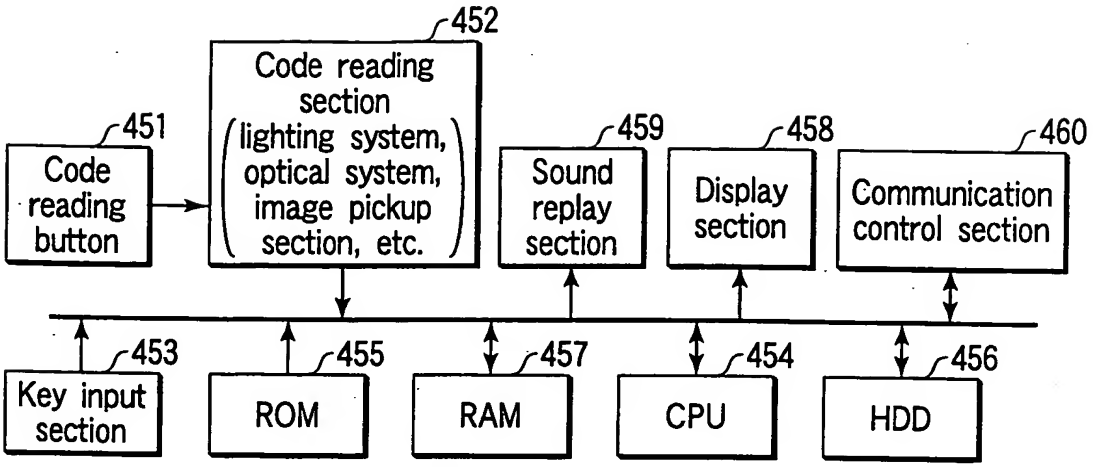

452
Code reading section (lighting system, optical system, image pickup section, etc.
451
Code reading button
459
Sound replay section
458
Display section
460
Communication control section
453
Key input section
455
ROM
457
RAM
454
CPU
456
HDD

FIG. 16

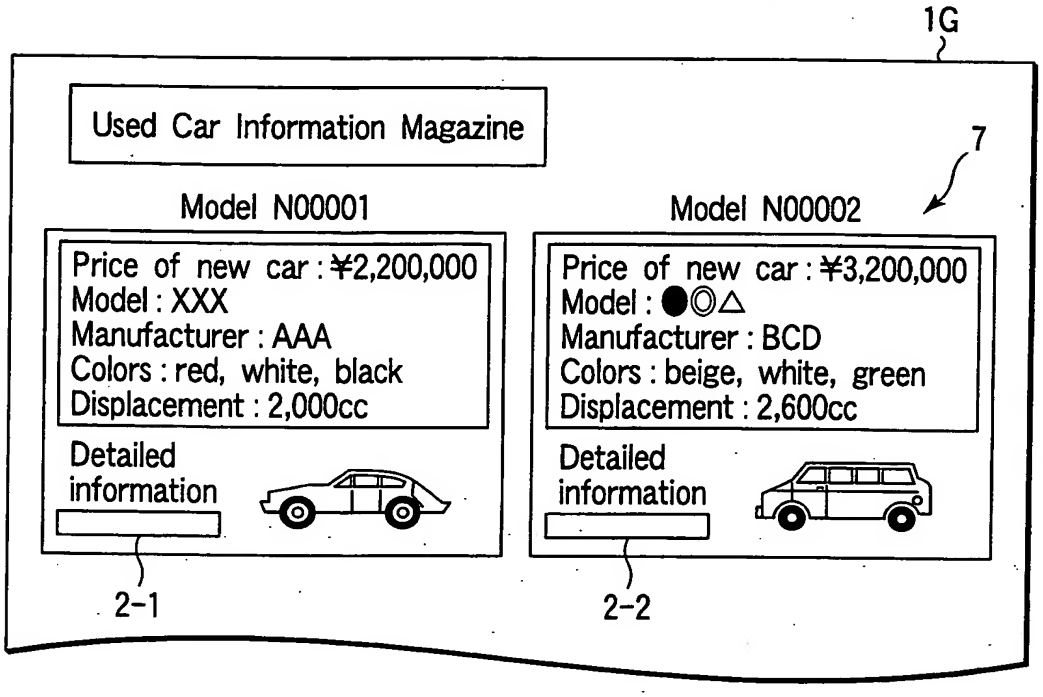

1G
Used Car Information Magazine
7
Model N00001
Price of new car : ¥2,200,000
Model : XXX
Manufacturer : AAA
Colors : red, white, black
Displacement : 2,000cc
Detailed information
2-1
Model N00002
Price of new car : ¥3,200,000
Model : ●◎△
Manufacturer : BCD
Colors : beige, white, green
Displacement : 2,600cc
Detailed information
2-2

FIG. 19

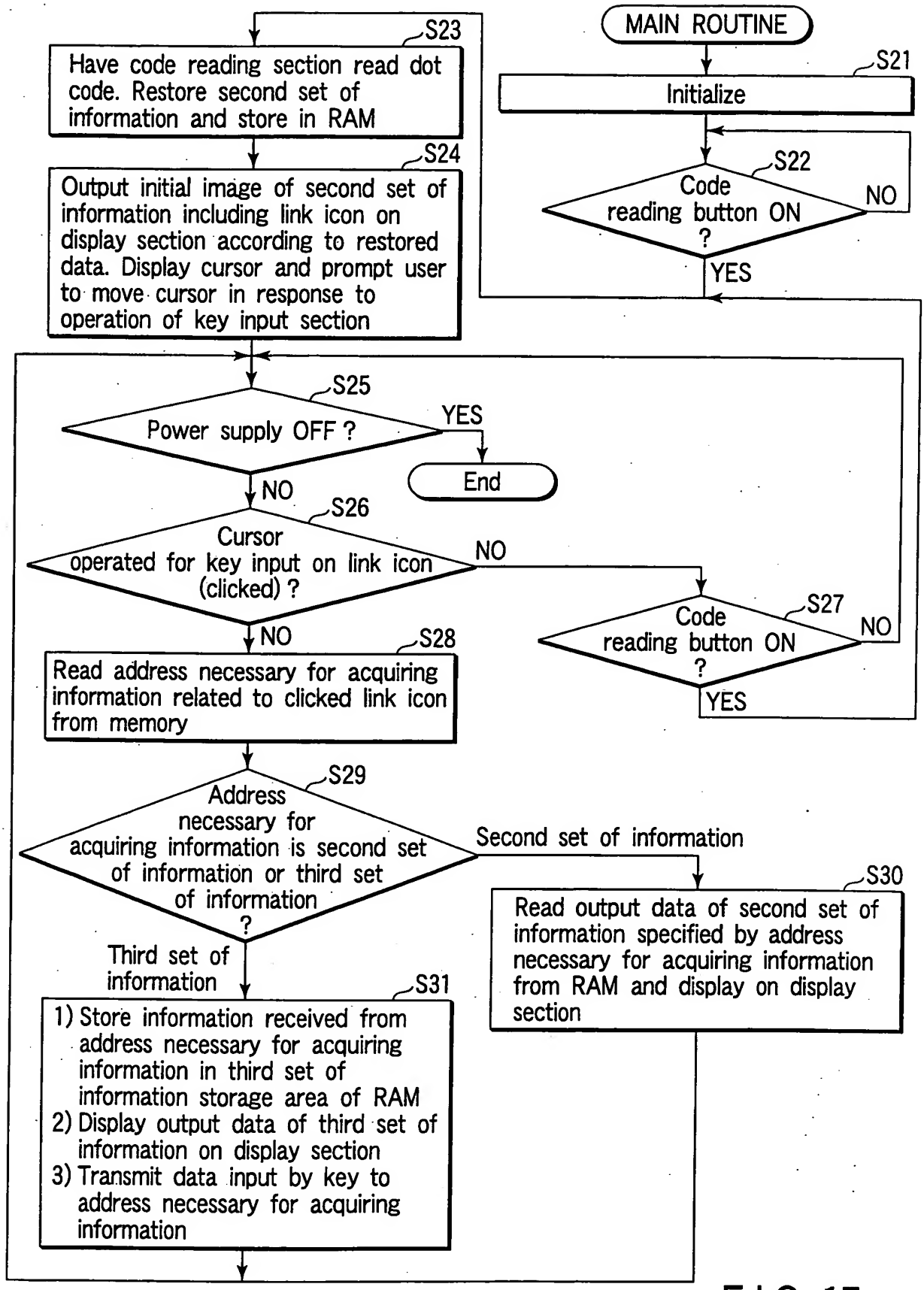

MAIN ROUTINE
S21
Initialize
S22
Code reading button ON ?
NO
YES
S23
Have code reading section read dot code. Restore second set of information and store in RAM
S24
Output initial image of second set of information including link icon on display section according to restored data. Display cursor and prompt user to move cursor in response to operation of key input section
S25
Power supply OFF ?
YES
End
NO
S26
Cursor operated for key input on link icon (clicked) ?
NO
S27
Code reading button ON ?
NO
YES
NO
S28
Read address necessary for acquiring information related to clicked link icon from memory
S29
Address necessary for acquiring information is second set of information or third set of information ?
Second set of information
S30
Read output data of second set of information specified by address necessary for acquiring information from RAM and display on display section
Third set of information
S31
1) Store information received from address necessary for acquiring information in third set of information storage area of RAM
2) Display output data of third set of information on display section
3) Transmit data input by key to address necessary for acquiring information

FIG. 17

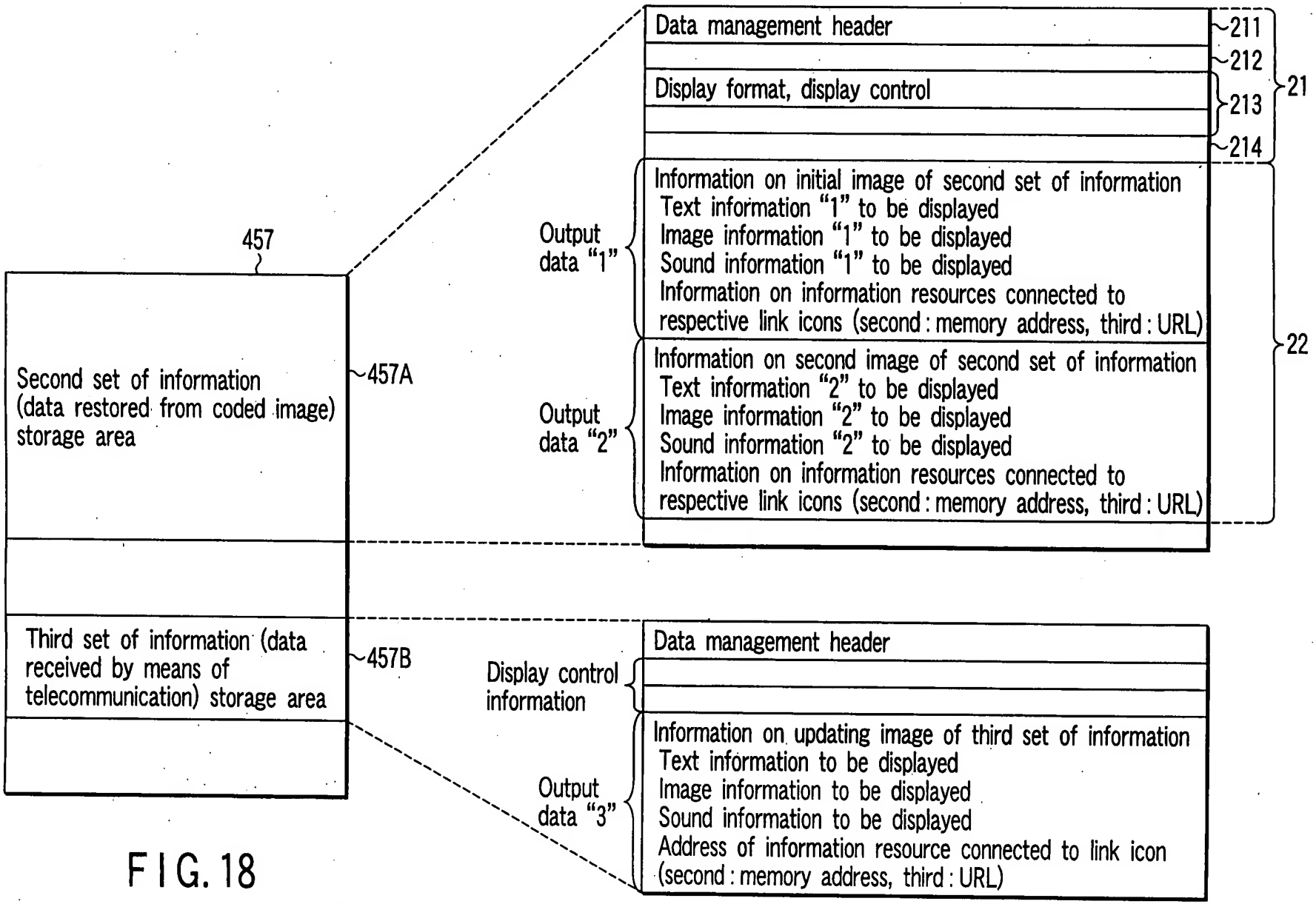

457
Second set of information (data restored from coded image) storage area
457A
Third set of information (data received by means of telecommunication) storage area
457B
Data management header
211
212
Display format, display control
213
214
21
Output data "1"
Information on initial image of second set of information
Text information "1" to be displayed
Image information "1" to be displayed
Sound information "1" to be displayed
Information on information resources connected to respective link icons (second : memory address, third : URL)
Output data "2"
Information on second image of second set of information
Text information "2" to be displayed
Image information "2" to be displayed
Sound information "2" to be displayed
Information on information resources connected to respective link icons (second : memory address, third : URL)
22
Data management header
Display control information
Output data "3"
Information on updating image of third set of information
Text information to be displayed
Image information to be displayed
Sound information to be displayed
Address of information resource connected to link icon
(second : memory address, third : URL)

FIG. 18

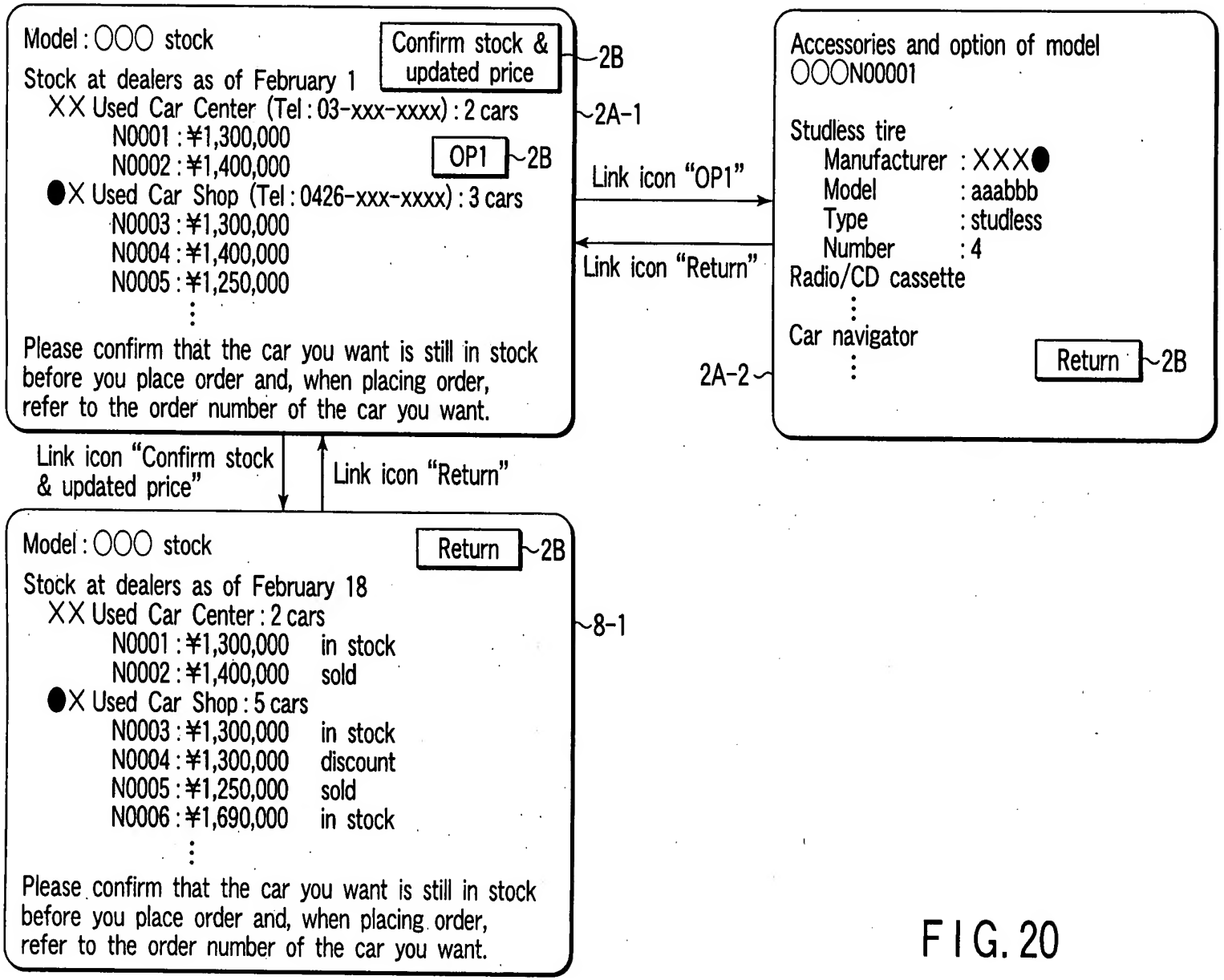

Model : ○○○ stock
Confirm stock & updated price
2B
Stock at dealers as of February 1
2A-1
XX Used Car Center (Tel : 03-xxx-xxxx) : 2 cars
N0001 : ¥1,300,000
N0002 : ¥1,400,000
OP1
2B
●X Used Car Shop (Tel : 0426-xxx-xxxx) : 3 cars
N0003 : ¥1,300,000
N0004 : ¥1,400,000
N0005 : ¥1,250,000
Please confirm that the car you want is still in stock before you place order and, when placing order, refer to the order number of the car you want.
Link icon "OP1"
Link icon "Return"
Accessories and option of model ○○○N00001
Studless tire
Manufacturer : XXX●
Model : aaabbb
Type : studless
Number : 4
Radio/CD cassette
Car navigator
2A-2
Return
2B
Link icon "Confirm stock & updated price"
Link icon "Return"
Model : ○○○ stock
Return
2B
Stock at dealers as of February 18
8-1
XX Used Car Center : 2 cars
N0001 : ¥1,300,000 in stock
N0002 : ¥1,400,000 sold
●X Used Car Shop : 5 cars
N0003 : ¥1,300,000 in stock
N0004 : ¥1,300,000 discount
N0005 : ¥1,250,000 sold
N0006 : ¥1,690,000 in stock
Please confirm that the car you want is still in stock before you place order and, when placing order, refer to the order number of the car you want.

FIG. 20

First set of information	Second set of information	Third set of information
Display of list of car types ·Information at shipment : model, displacernent, price, color, color image of car, manufacturer ·Grade ·Available car dealer : names, addresses, telephone numbers	◇Information on initial image of second set of information ·Stock of each car dealer at a given time point ·Car identification number (for reference) ·Telephone number to be dialed for order placement of the car dealer ·Accessories (optional) ·Current price ·Servicing information ·Recorded mileage ·Provision or non-provision of a letter of guarantee ·Engine sound ·Payment conditions	·Stock of each car model ·Updated price of each car ·Information on newly arrived used-cars

FIG. 21

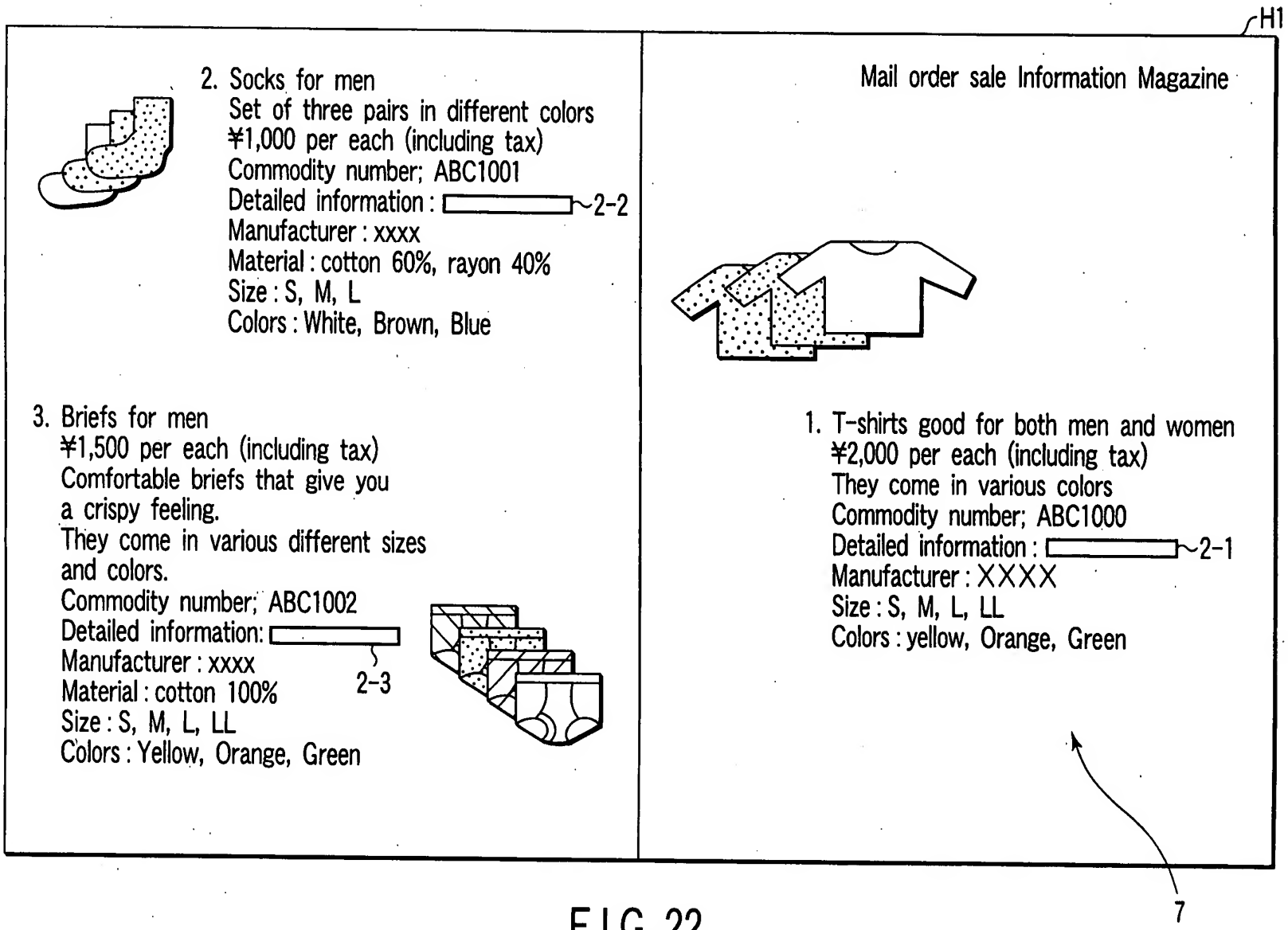

H1
Mail order sale Information Magazine
1. T-shirts good for both men and women
¥2,000 per each (including tax)
They come in various colors
Commodity number; ABC1000
Detailed information :
2-1
Manufacturer : XXXX
Size : S, M, L, LL
Colors : yellow, Orange, Green
2. Socks for men
Set of three pairs in different colors
¥1,000 per each (including tax)
Commodity number; ABC1001
Detailed information :
2-2
Manufacturer : xxxx
Material : cotton 60%, rayon 40%
Size : S, M, L
Colors : White, Brown, Blue
3. Briefs for men
¥1,500 per each (including tax)
Comfortable briefs that give you
a crispy feeling.
They come in various different sizes
and colors.
Commodity number; ABC1002
Detailed information:
2-3
Manufacturer : xxxx
Material : cotton 100%
Size : S, M, L, LL
Colors : Yellow, Orange, Green
7

FIG. 22

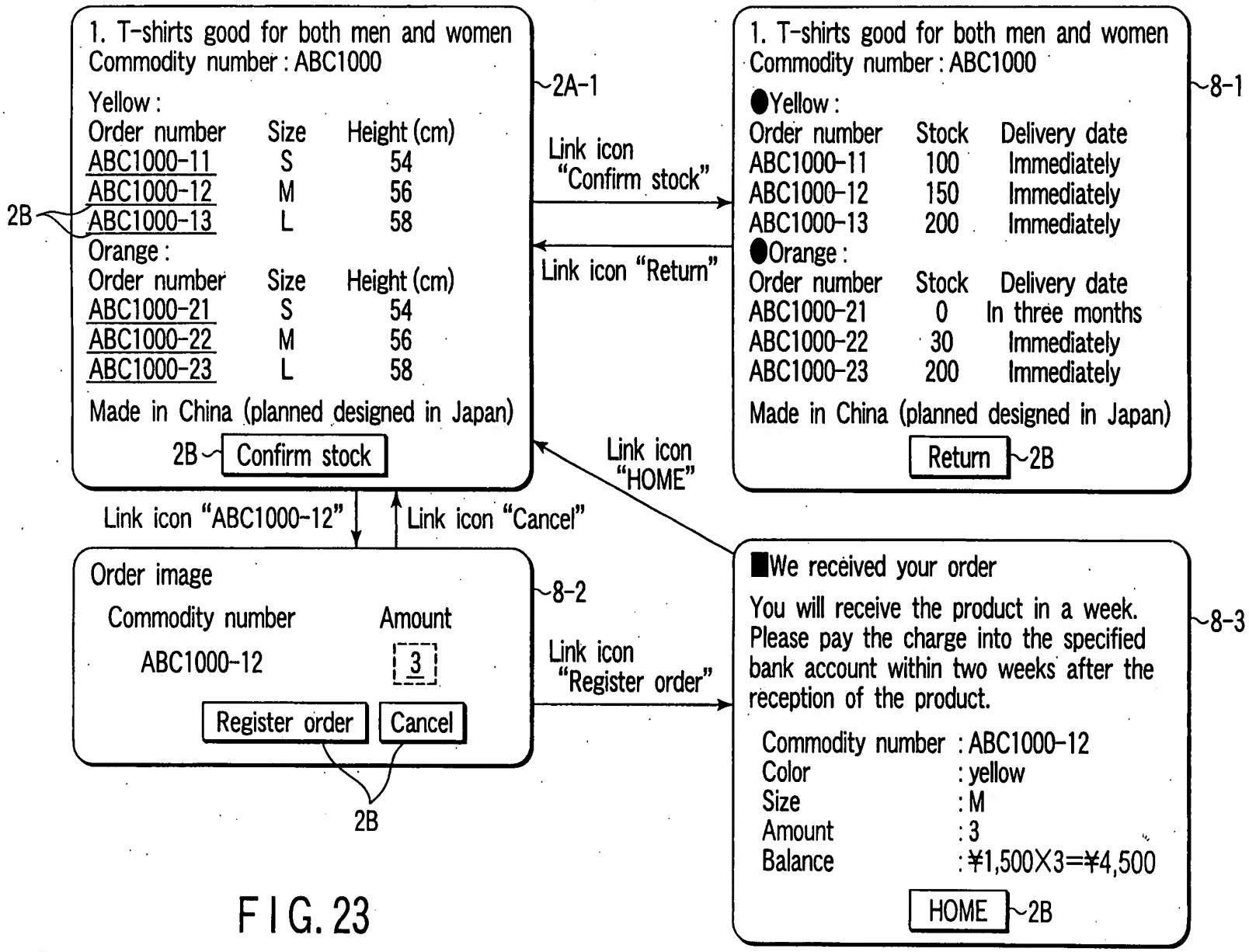
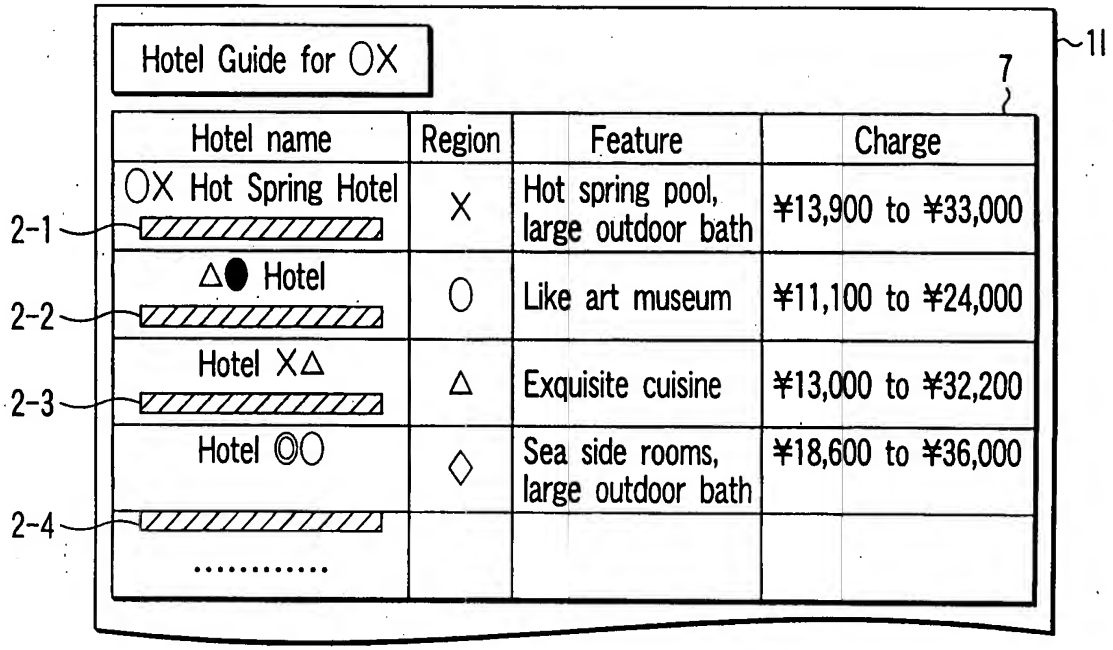

1. T-shirts good for both men and women
Commodity number : ABC1000
Yellow :
Order number Size Height (cm)
ABC1000-11 S 54
ABC1000-12 M 56
ABC1000-13 L 58
Orange :
Order number Size Height (cm)
ABC1000-21 S 54
ABC1000-22 M 56
ABC1000-23 L 58
Made in China (planned designed in Japan)
Confirm stock
2A-1
2B
Link icon "Confirm stock"
Link icon "Return"
1. T-shirts good for both men and women
Commodity number : ABC1000
Yellow :
Order number Stock Delivery date
ABC1000-11 100 Immediately
ABC1000-12 150 Immediately
ABC1000-13 200 Immediately
Orange :
Order number Stock Delivery date
ABC1000-21 0 In three months
ABC1000-22 30 Immediately
ABC1000-23 200 Immediately
Made in China (planned designed in Japan)
Return
8-1
Link icon "HOME"
Link icon "ABC1000-12"
Link icon "Cancel"
Order image
Commodity number Amount
ABC1000-12 3
Register order
Cancel
8-2
Link icon "Register order"
We received your order
You will receive the product in a week. Please pay the charge into the specified bank account within two weeks after the reception of the product.
Commodity number : ABC1000-12
Color : yellow
Size : M
Amount : 3
Balance : ¥1,500X3=¥4,500
HOME
8-3

FIG. 23

FIG. 24

First set of information	Second set of information	Third set of information
·Commodity name ·Commodity number ·Manufacturer ·Materials ·Colors ·Information on design of commodity (color image)	·Order number per each order ·Detailed specification per each size : size, height ·Country of manufacturer	Information on all first, second, third images <Reception> ·Stock relating to each order ·Delivery date relating to each order ·Confirmation relating to order : Item name, item ID, specification, amount, price <Transmission> ·Ordered item ID ·Ordered number

FIG. 25



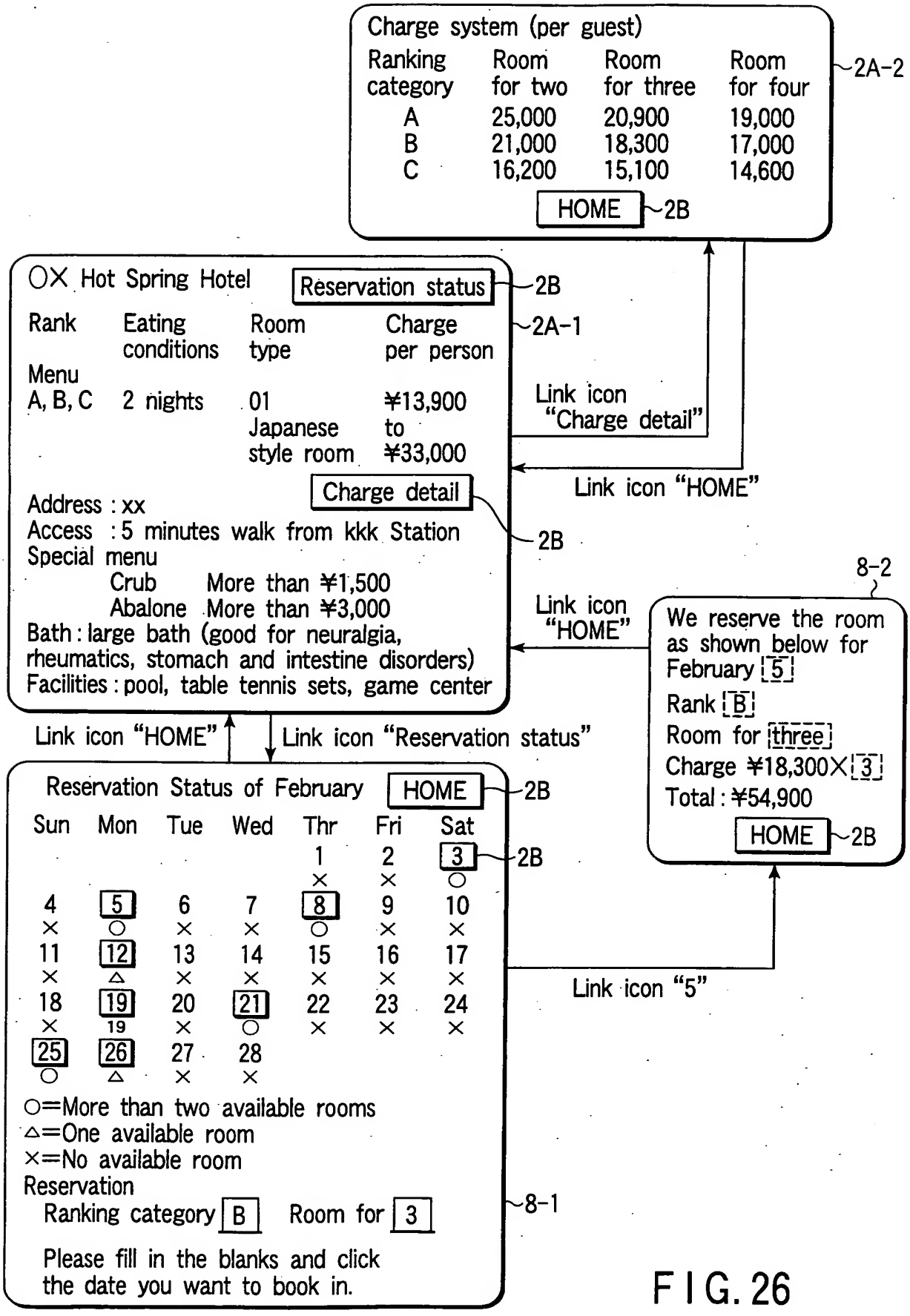

Charge system (per guest)
Ranking category
Room for two
Room for three
Room for four
A 25,000 20,900 19,000
B 21,000 18,300 17,000
C 16,200 15,100 14,600
HOME
2B
2A-2
OX Hot Spring Hotel
Reservation status
2B
2A-1
Rank
Eating conditions
Room type
Charge per person
Menu
A, B, C
2 nights
01 Japanese style room
¥13,900 to ¥33,000
Charge detail
2B
Address : xx
Access : 5 minutes walk from kkk Station
Special menu
Crub More than ¥1,500
Abalone More than ¥3,000
Bath : large bath (good for neuralgia, rheumatics, stomach and intestine disorders)
Facilities : pool, table tennis sets, game center
Link icon "Charge detail"
Link icon "HOME"
Link icon "HOME"
8-2
We reserve the room as shown below for February 5
Rank B
Room for three
Charge ¥18,300×3
Total : ¥54,900
HOME
2B
Link icon "HOME"
Link icon "Reservation status"
Reservation Status of February
HOME
2B
Sun Mon Tue Wed Thr Fri Sat
1 2 3
× × ○
4 5 6 7 8 9 10
× ○ × × ○ × ×
11 12 13 14 15 16 17
× △ × × × × ×
18 19 20 21 22 23 24
× 19 × ○ × × ×
25 26 27 28
○ △ × ×
○=More than two available rooms
△=One available room
×=No available room
Reservation
Ranking category B Room for 3
Please fill in the blanks and click the date you want to book in.
8-1
Link icon "5"

FIG. 26

FIG. 27

First set of information	Second set of information	Third set of information
·Title information ·Hotel names ·Region ·Features of each hotel ·Room charges	Information on each hotel (initial image, second image) ·Types and ranking categories of rooms ·Food conditions ·Room description of each room ·address, telephone number ·Information on public transportation ·Special menu and other appealing information ·Detailed information on baths ·Detailed information on hotel facilities ·Charge system for each room ranking category and number of persons	<Reception> ·Room availability of each calendar day ·Input menu for room reservation <Transmission> Breakdown of reservation ·Ranking category of room ·Number of persons

FIG. 28

First set of information	Second set of information	Third set of information
·Title of information magazine ·Code of each security ·Company name ·Quotation ·Quotation as compared with that of yesterday, percentage of rise or fall ·Final quotation, initial quotation, highest quotation, lowest quotation of yesterday	◇Information on initial image of second set of information 1) Table display program A 2) Text data in table 3) Link icon display data	◇Information on initial image of third set of information 1) Part of text data in table Data at updating time : quotations, quotations as compared with those of yesterday, updating time
	◇Information on second image of second set of information 1) Title text data 2) Graph preparation/display program B data 3) Graph (numerical) data to be input to program B 4) Link icon display data	◇Information on second image of third set of information 1) Updated graph (numerical) data to be input to program B

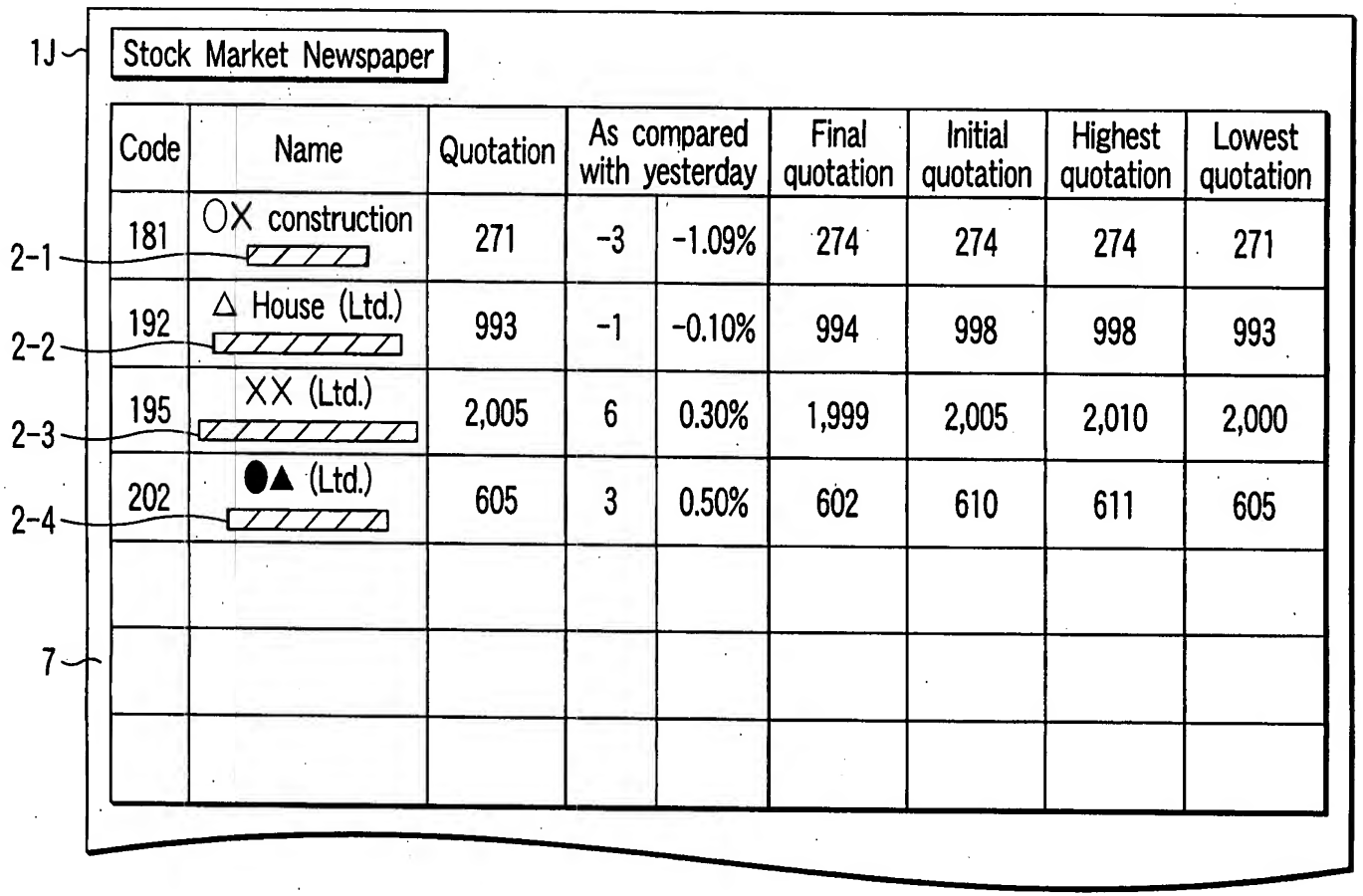

1J
Stock Market Newspaper
Code
Name
Quotation
As compared with yesterday
Final quotation
Initial quotation
Highest quotation
Lowest quotation
181
○X construction
271
-3
-1.09%
274
274
274
271
2-1
192
△ House (Ltd.)
993
-1
-0.10%
994
998
998
993
2-2
195
XX (Ltd.)
2,005
6
0.30%
1,999
2,005
2,010
2,000
2-3
202
●▲ (Ltd.)
605
3
0.50%
602
610
611
605
2-4
7

FIG. 29

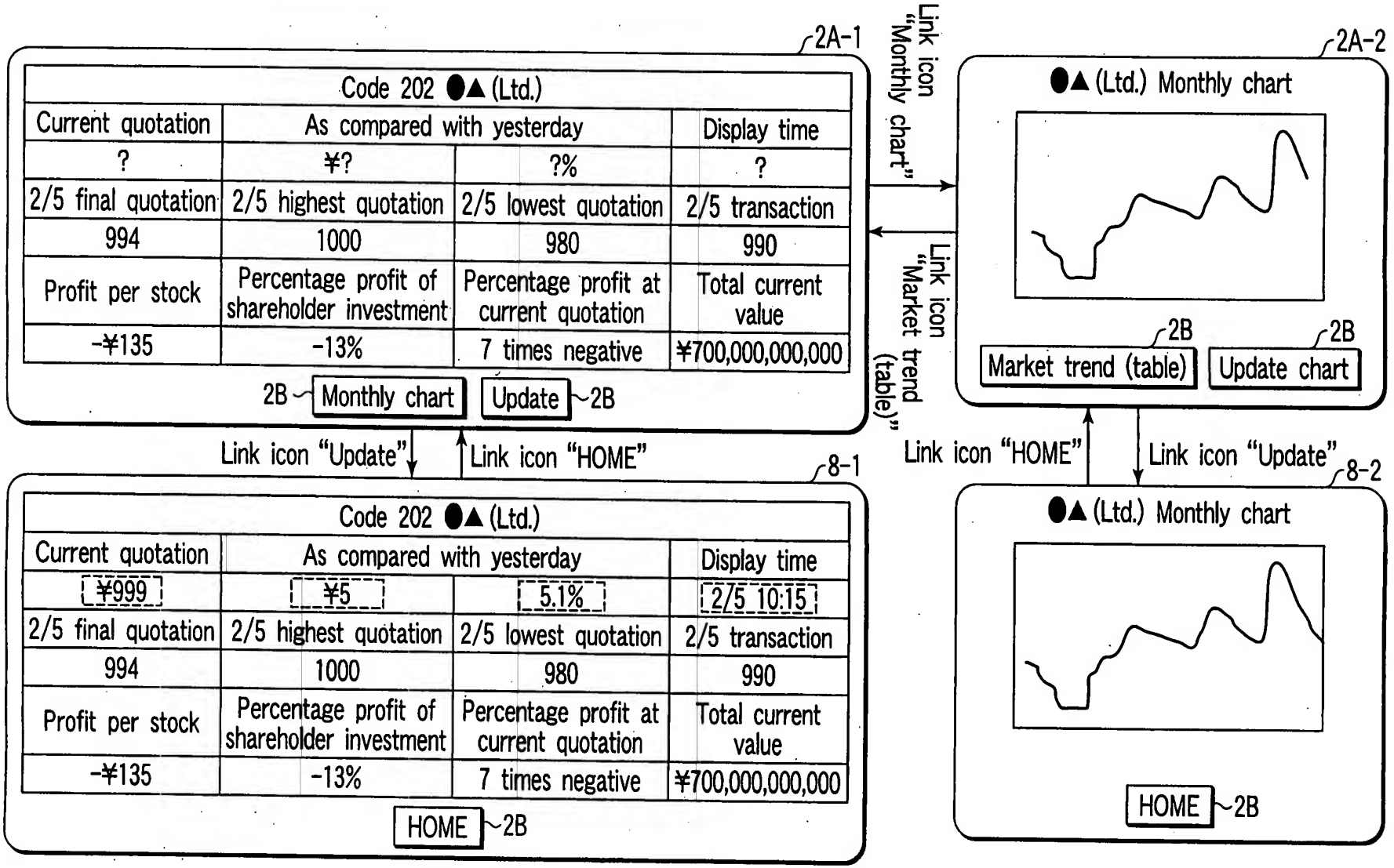

2A-1
Code 202 ●▲ (Ltd.)
Current quotation
As compared with yesterday
Display time
?
¥?
?%
?
2/5 final quotation
2/5 highest quotation
2/5 lowest quotation
2/5 transaction
994
1000
980
990
Profit per stock
Percentage profit of shareholder investment
Percentage profit at current quotation
Total current value
-¥135
-13%
7 times negative
¥700,000,000,000
2B
Monthly chart
Update
2B
Link icon "Monthly chart"
Link icon "Market trend (table)"
2A-2
●▲ (Ltd.) Monthly chart
2B
Market trend (table)
2B
Update chart
Link icon "Update"
Link icon "HOME"
Link icon "HOME"
Link icon "Update"
8-1
Code 202 ●▲ (Ltd.)
Current quotation
As compared with yesterday
Display time
¥999
¥5
5.1%
2/5 10:15
2/5 final quotation
2/5 highest quotation
2/5 lowest quotation
2/5 transaction
994
1000
980
990
Profit per stock
Percentage profit of shareholder investment
Percentage profit at current quotation
Total current value
-¥135
-13%
7 times negative
¥700,000,000,000
HOME
2B
8-2
●▲ (Ltd.) Monthly chart
HOME
2B

FIG. 30